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Local Context Filters

LOCAL CONTEXT FILTERS

BACKGROUND

With the increasing availability of media creation devices and the increasing storage capacity of memory devices, media device users may create an increasing quantity of media items such as photos, images, videos, audio recordings, documents and the like. Organizing, searching and retrieving desired media items from an increasing number of stored media items can be time consuming and challenging.

SUMMARY

Some implementations relate generally to media organization and retrieval systems and, more particularly, to methods, systems and computer readable media for local context filtering of global associative collections. Some implementations can include a method. In some implementations, the method can include receiving a selection of one or more media items associated with a first local context, the first local context corresponding to a first group of media items. The method can also include creating an associative collection of the one or more selected media items within the first local context, the associative collection within the first local context including media items from the first group. The method can further include generating a shortcut key sequence and assigning the shortcut key sequence to the associative collection. The method can also include causing another media item to be displayed within the first local context, and adding the other media item to the associative collection within the first local context in response to the shortcut key sequence being received.

The method can further include changing the local context to a second local context corresponding to a second group of media items, and receiving a command to display the associative collection within the second local context. The method can also include displaying the associative collection within the second local context, the associative collection within the second local context including media items from the second group. Each media item can include one or more of an image, a video file, an audio file, and a document. The first local context can correspond to a first event and the second local context can correspond to a second event different from the first event.

The method can also include receiving an indication of the associative collection as a favorite and storing the indication of the associative collection as a favorite. The method can further include receiving a command via a user interface to display only associative collections indicated as favorites, and causing only associative collections indicated as favorites to be displayed.

The method can also include causing an associative collection graphical element to be displayed on each media item included in one or more associative collections, and receiving a hover over indication from one of the associative collection graphical elements. The method can further include displaying a list of associative collections to which the media item corresponding to the one associative collection element is included in.

The method can also include causing a rating selection element for each media item to be displayed, the rating selection element including one or more selectable rating levels, and receiving a rating for one or more media items. The method can further include storing the received rating within the associative collection for the first local context, and causing local context shortcuts corresponding to one or more rating levels to be displayed. The method can

also include receiving a rating level shortcut selection, and displaying the media items within the first local context having the selected rating level.

Some implementations can include a system comprising one or more processors configured to perform operations. The operations can include receiving a selection of one or more media items associated with a first local context, the first local context corresponding to a first group of media items. The operations can also include creating an associative collection of the one or more selected media items within the first local context, the associative collection within the first local context including media items from the first group. The operations can further include generating a shortcut key sequence and assigning the shortcut key sequence to the associative collection. The operations can also include causing another media item to be displayed within the first local context, and adding the other media item to the associative collection within the first local context in response to the shortcut key sequence being received.

The operations can further include changing the local context to a second local context corresponding to a second group of media items, and receiving a command to display the associative collection within the second local context. The operations can also include displaying the associative collection within the second local context, the associative collection within the second local context including media items from the second group.

Each media item can include one or more of an image, a video file, an audio file, and a document. The first local context can correspond to a first event and the second local context can correspond to a second event different from the first event.

The operations can also include receiving an indication of the associative collection as a favorite, and storing the indication of the associative collection as a favorite. The operations can further include receiving a command via a user interface to display only associative collections

indicated as favorites, and causing only associative collections indicated as favorites to be displayed.

The operations can also include causing an associative collection graphical element to be displayed on each media item included in one or more associative collections, and receiving a hover over indication from one of the associative collection graphical elements. The operations can further include displaying a list of associative collections to which the media item corresponding to the one associative collection element is included in.

The operations can also include causing a rating selection element for each media item to be displayed, the rating selection element including one or more selectable rating levels, and receiving a rating for one or more media items. The operations can further include storing the received rating within the associative collection for the first local context, and causing local context shortcuts corresponding to one or more rating levels to be displayed. The operations can also include receiving a rating level shortcut selection, and displaying the media items within the first local context having the selected rating level.

Some implementations can include a nontransitory computer readable medium having software instructions stored thereon that, when executed by a processor, cause the processor to perform operations. The operations can include receiving a selection of one or more media items associated with a first local context, the first local context corresponding to a first group of media items. The operations can also include creating an associative collection of the one or more selected media items within the first local context, the associative collection within the first local context including media items from the first group. The operations can further include generating a shortcut key sequence and assigning the shortcut key sequence to the associative collection. The operations can also include causing another media item to be displayed within

the first local context, and adding the other media item to the associative collection within the first local context in response to the shortcut key sequence being received.

The operations can further include changing the local context to a second local context corresponding to a second group of media items, and receiving a command to display the associative collection within the second local context. The operations can also include displaying the associative collection within the second local context, the associative collection within the second local context including media items from the second group.

Each media item can include one or more of an image, a video file, an audio file, and a document. The first local context can correspond to a first event and the second local context can correspond to a second event different from the first event.

The operations can also include receiving an indication of the associative collection as a favorite, and storing the indication of the associative collection as a favorite. The operations can further include receiving a command via a user interface to display only associative collections indicated as favorites, and causing only associative collections indicated as favorites to be displayed.

The operations can also include causing an associative collection graphical element to be displayed on each media item included in one or more associative collections, and receiving a hover over indication from one of the associative collection graphical elements. The operations can further include displaying a list of associative collections to which the media item corresponding to the one associative collection element is included in.

The operations can also include causing a rating selection element for each media item to be displayed, the rating selection element including one or more selectable rating levels, and receiving a rating for one or more media items. The operations can further include storing the

received rating within the associative collection for the first local context, and causing local context shortcuts corresponding to one or more rating levels to be displayed. The operations can also include receiving a rating level shortcut selection, and displaying the media items within the first local context having the selected rating level.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagram of an example user interface for local context filters in accordance with some implementations.

FIG. 2 is a diagram of an example user interface for viewing an associative collection within a local context in accordance with some implementations.

FIG. 3 is a diagram of an example user interface for adding to an associative collection from a large-size single image view within a local context in accordance with some implementations.

FIG. 4 is a diagram of an example user interface for viewing a book associative collection within a local context in accordance with some implementations.

FIG. 5 is a diagram of an example user interface for viewing favorite associative collections in accordance with some implementations.

FIG. 6 is a diagram of an example user interface for viewing an associative collection within a different local context than that shown in FIG. 2 in accordance with some implementations.

FIG. 7 is a diagram of an example user interface for rating media items in an associative collection within a local context in accordance with some implementations.

FIG. 8 is a flowchart of an example method for local context filters in accordance with some implementations.

FIG. 9 is a flowchart of an example method for selecting favorite local associative collections in accordance with some implementations.

FIG. 10 is a flowchart of an example method for local associative collection indications in accordance with some implementations.

FIG. 11 is a flowchart of an example method for rating media items in a local associative collection in accordance with some implementations.

FIG. 12 is a diagram of a computer system for local context filtering in accordance with some implementations.

DETAILED DESCRIPTION

In general, some implementations provide systems, methods and/or computer readable media for local context filtering of media items such as images, videos, audio files and/or documents. The local context can include a group, album or folder of media items.

As discussed herein, a media item may reside in one group or event (i.e., a local context), which is similar to a folder in an operating system. A media item can be a member of multiple associative collections at the same time and an associative collection may span multiple groups, folder or events. Associative collections may contain references to media items and not copies of the media items. Thus, a media item can belong to multiple associative collections without using storage space for each instance of the media item in an associative collection. The local context refers to one or more members of an associative collection within a selected group. For example, a “Favorite Shots” associative collection may span the birthday and beach groups. When a user is viewing the birthday group and selects the “Favorite Shots” associative collection, the pictures that are stored in the birthday group and which are member of the “Favorite Shots” collection are

shown. Thus, the birthday group provides a local context for displaying pictures from the "Favorite Shots" collection.

Associative collection may be global and may appear dynamically in a local context if a selected collection contains items from the local context. For example, Collections A and B only appear when "Group 1" is selected as shown in FIG. 1, whereas Collection A and Book A appear when "Group 2" is selected, as shown in FIG. 6.

While an example of rating collections (e.g., star ratings) are discussed below, it will be appreciated that the stars are an example of smart collection. A smart collection refers to the ability of an implementation to not only filter static collections but also any dynamic collections that fulfill a certain rule (e.g., "rating==one star", or "file ending == NEF" to filter RAW images, or "Camera == Nikon" to filter images shot with a Nikon camera). In other words, the dynamic local context filtering can be based on 1) the group selected (e.g., the local context), 2) an associative collection selected and 3) another selected criterion or rule (e.g., one star).

FIG. 1 is a diagram of an example user interface 100 for local context filters. The interface includes a media item groups section 130. The media item groups section 130 includes an all items selection element 102, a label 1 selection 104, a group 1 selection 106, a label 2 selection 108, a label 2 selection 108 and a group 2 selection 110. The all items selection element 102 can be used to select all media items available to the application, on a computer, in a device and/or in a cloud storage system. The all items selection element 102, when selected, sets the context to global.

Optionally labels 1 and 2 (104 and 108) can used to indicate media organization levels such as years and can be used to represent a level above groups in an organizational hierarchy. Groups 1 and 2 (106 and 110) can be used to indicate media item groups, folders, events,

activities, trips or the like. In general, the group 1 and 2 elements (106 and 110) can represent albums or groups of media items. The groups and/or labels can comprise a local context. However, as noted above, an associative collection may span multiple local contexts (e.g., folders, groups, events, labels or the like)

The interface 100 also includes a collection labels section 132. The collection labels section 132 includes links to one or more collections. For example, as shown in FIG. 1, the collection section 132 includes a selection for collection A (112) and a selection for a book A (114). The collections can be associative collections in which media items are referenced (or associated) within a collection, but not copied to the collection. In other words, associative collections contain pointers (e.g., filenames, locations, or the like) to the media items within the associative collection.

The interface 100 also includes a collection link section 134 that includes links (136-140) corresponding to the collections (112-114). Each link (136-138) includes a collection name and a shortcut key (e.g., “1” for Collection A and “3” for Book A). Images (e.g., one or more of 118 – 128) can be selected and drag/dropped onto a shortcut link to have the selected images placed into the corresponding associative collection. Also, one or more images can be selected and added to a collection simply by pressing the shortcut link or the shortcut key (e.g., “1” for Collection A).

The interface 100 includes an image section having a plurality of images 118 – 128. As can be seen in FIG. 1, when an image is part of an associative collection, a symbol or indication (142 – 146) can be placed on a respective image to indicate that the image is included in one or more associative collections. When the symbol or indication (142 – 146) is hovered over or selected, an interface element can be displayed that shows the list of associative collections to

which that image belongs. The list of associative collections can include link that are selectable to switch to the view for the selected associative collection.

In FIG. 1, the image group "Group 1" is selected as shown by dotted line around Group 1 (106). The selection of a label or group establishes the local context within which an associative collection may be displayed. For example, in FIG. 1, the local context would be Group 1 (106), which could be a group of images from an event such as a birthday party, a vacation or the like. The images (118 – 128) are in the Group 1 images. If the number of images in a group exceeds the capacity of the screen to show all of the images, the user interface 100 can dynamically add paging controls, scrolling controls or the like.

FIG. 2 is a diagram of an example user interface 200 for viewing an associative collection within a local context. In this case, the local context is Group 2 (110) and the associative collection selected is Collection A as indicated by the title near the top middle portion of the user interface. Also, the Collection A link 136 is highlighted to indicate that Collection A is the active associative collection. FIG. 2 also shows backward and forward arrows (202 and 204, respectively). The forward/backward arrow navigation elements 202, 204 operate to move the system either forward or backward to an earlier selected local context and/or associative collection. Thus, a user can navigate between earlier and later image views that have been selected.

Also, the collection view user interface 200 includes an element 206 for moving to the same collection in a different context. For example, if Collection A is for the user's "Top Shots" (or favorite images), the element 206, when selected would take the user to a "Top Shots" associative collection in a different local context (e.g., Group 2 instead of Group 1 as shown).

It will be appreciated that because Collection A was selected, only the images (122, 124 and 128) in the local context that are members of the Collection A associative collection are shown.

FIG. 3 is a diagram of an example user interface 300 for adding to an associative collection from a large size single image view within a local context. The large-size image 302 can be added to one of the collections (136 – 140) by simply pressing the corresponding short cut key (e.g., 1 – 3). Alternatively, the large size image can be dragged/dropped on a desired collection link 136 – 140. The interface 300 also includes navigation elements 304 and 306 for moving among the large size images. The large size image can include a full (or near full) screen image view mode. Large size and full or near full refer to the size of the image relative to the user interface. If the image takes up a substantial portion of the interface then it can be considered to be large size or full/near-full.

FIG. 4 is a diagram of an example user interface 400 for viewing a book associative collection 402 within a local context (e.g., Group 2 110). In FIG. 4, the Book A collection has been selected as shown by bold border around the Book A collection link 140. Also shown on the left sidebar is a link for Book A (116).

FIG. 5 is a diagram of an example user interface 500 for viewing favorite associative collections in accordance with some implementations. The interface 500 includes an element 502 for toggling in and out of favorite collection mode. In favorite collection mode (as shown in FIG. 5), only a collection that has been indicated as a favorite is shown. In this example, only Collection B has been indicated as a favorite. The favorite selection/display system can be used to reduce screen clutter by only showing those collections that have been indicated as a favorite.

FIG. 6 is a diagram of an example user interface 600 for viewing an associative collection within a different local context than that shown in FIG. 2. As mentioned above, FIG. 2 shows associative collection A within the local context of Group 1. In FIG. 6, associative collection A is selected, but the local context has been changed to Group 2 (110). Thus, Collection A images within the local context of Group 2 are shown (602 – 606).

FIG. 7 is a diagram of an example user interface 700 for filtering media items by rating in an associative collection within a local context. The interface 700 includes two images 702 and 704 that have a rating (two stars) corresponding to the selected rating level of two stars shown by 706. The interface 700 also includes rating level collection links 708.

FIG. 8 is a flowchart of an example method 800 for local context filters. Processing begins at 802, where a system receives a selection of one or more media items within a first local context. Processing continues to 804.

At 804, a first associative collection within the first local context is created and includes the media items selected in 802. Processing continues to 806.

At 806, the system automatically generates a shortcut key and assigns the shortcut key to the collection. Processing continues to 808.

At 808, another media item is displayed within the first local context. Processing continues to 810.

At 810, the other media item is added to the associative collection in response to a user pressing the shortcut key (or via user dragging the image to a shortcut label and dropping the image over the label). Processing continues to 812.

At 812, the local context is changed to a different local context (e.g., going from the context of Group 1 to Group 2). Processing continues to 814.

At 814, the system receives a selection of an associative collection for display. Processing continues to 816.

At 816, media items in the associative collection from the second local context are displayed.

FIG. 9 is a flowchart of an example method 900 for selecting favorite local associative collections. Processing begins at 902, where an indication of an associative collection as a favorite. Processing continues to 904.

At 904, the indication of a collection as a favorite is stored. Processing continues to 906.

At 906, a command is received from a graphical user interface. The command indicates to the system that only the favorite collections are to be shown. Processing continues to 908.

At 908, collections having a favorite indication are displayed.

FIG. 10 is a flowchart of an example method 1000 for local associative collection indications. Processing begins at 1002, where a collection indicator is displayed on each image that belongs to one or more associative collections. Processing continues to 1004.

At 1004, a hove over (or other similar indication) is received for the associative collection indicator on one of the images. Processing continues to 1006.

At 1006, a list of associative collections to which the image belongs is displayed.

FIG. 11 is a flowchart of an example method 1100 for rating media items in a local associative collection. Processing begins at 1102, where a rating selection element is displayed for each media item within a local context. Processing continues to 1104.

At 1104, a rating is received and stored for one or more media items within the local context. Processing continues to 1106.

At 1106, local context collections shortcuts are displayed corresponding to rating levels. Processing continues to 1108.

At 1108, the system receives a rating level collection shortcut selection. Processing continues to 1110.

At 1110, media items with the local context having a selected rating level are displayed.

It will be appreciated that 802-816, 902-908, 1002-1006, and/or 1102-1110 may be repeated in whole or in part in order to accomplish a contemplated local context filtering task.

FIG. 12 is a diagram of an example computing device 1200 that can be configured for local context filtering in accordance with some implementations. The computing device 1200 includes a processor 1202, operating system 1204, memory 1206 and I/O interface 1208. The memory 1206 can include a local context filter application 1210 and a local context database 1212 (e.g., for storing associative collection information or the like).

In operation, the processor 1202 may execute the local context filter application 1210 stored in the memory 1206. The local context filter application 1210 can include software instructions that, when executed by the processor, cause the processor to perform operations for local filter collection in accordance with the present disclosure (e.g., the local context filter application 1210 can perform one or more of steps 802-816, 902-908, 1002-1006, and/or 1102-1110 described above and, in conjunction, can access the database 1212). The local context filter application 1210 can also operate in conjunction with the operating system 1204.

The local context filter computing device (e.g., 1200) can include, but is not limited to, a single processor system, a multi-processor system (co-located or distributed), a cloud computing system, or a combination of the above.

The client (or user) device(s) can include, but are not limited to, a desktop computer, a laptop computer, a portable computer, a tablet computing device, a smartphone, a feature phone, a personal digital assistant, a media player, televisions, an electronic book reader, an entertainment system of a vehicle or the like. Also, client/user devices can include wearable computing devices (e.g., glasses, watches and the like), furniture mounted computing devices and/or building mounted computing devices.

All or a portion of a local context filtering operation can be performed on a server system. For example, a user device can include a wireless mobile device and can be configured to filter and organize media items via a server. The server can be configured to perform one or more of steps 802-816, 902-908, 1002-1006, and/or 1102-1110, with the user interface being displayed on the user device. The media items and/or associative collection information may be stored on a server, a cloud storage system, locally on a user device or on a combination of the above.

The user devices can be connected to the server via a network. The network connecting user devices to the user interface framework server can be a wired or wireless network, and can include, but is not limited to, a WiFi network, a local area network, a wide area network, the Internet, or a combination of the above.

The data storage, memory and/or computer readable medium can be a nontransitory medium such as a magnetic storage device (hard disk drive or the like), optical storage device (CD, DVD or the like), or electronic storage device (RAM, ROM, flash, or the like). The software instructions can also be contained in, and provided as, an electronic signal, for example in the form of software as a service (SaaS) delivered from a server (e.g., a distributed system and/or a cloud computing system).

Some implementations of the disclosed method, system, and computer readable media can be implemented in software (e.g., as a computer program product and/or nontransitory computer readable media having stored instructions for media presentation creation by imitation as described herein). The stored software instructions can be executed on a programmed general purpose computer, a special purpose computer, a microprocessor, or the like.

It is, therefore, apparent that there is provided, in accordance with the various example implementations disclosed herein, systems, methods and computer readable media for local context media filters.

ABSTRACT

Systems, methods and computer readable media for local context filters are disclosed. In some implementations, the method can include receiving a selection of one or more media items associated with a first local context, the first local context corresponding to a first group of media items. The method can also include creating an associative collection of the one or more selected media items within the first local context, the associative collection within the first local context including media items from the first group. The method can further include generating a shortcut key sequence and assigning the shortcut key sequence to the associative collection. The method can also include causing another media item to be displayed within the first local context, and adding the other media item to the associative collection within the first local context in response to the shortcut key sequence being received.

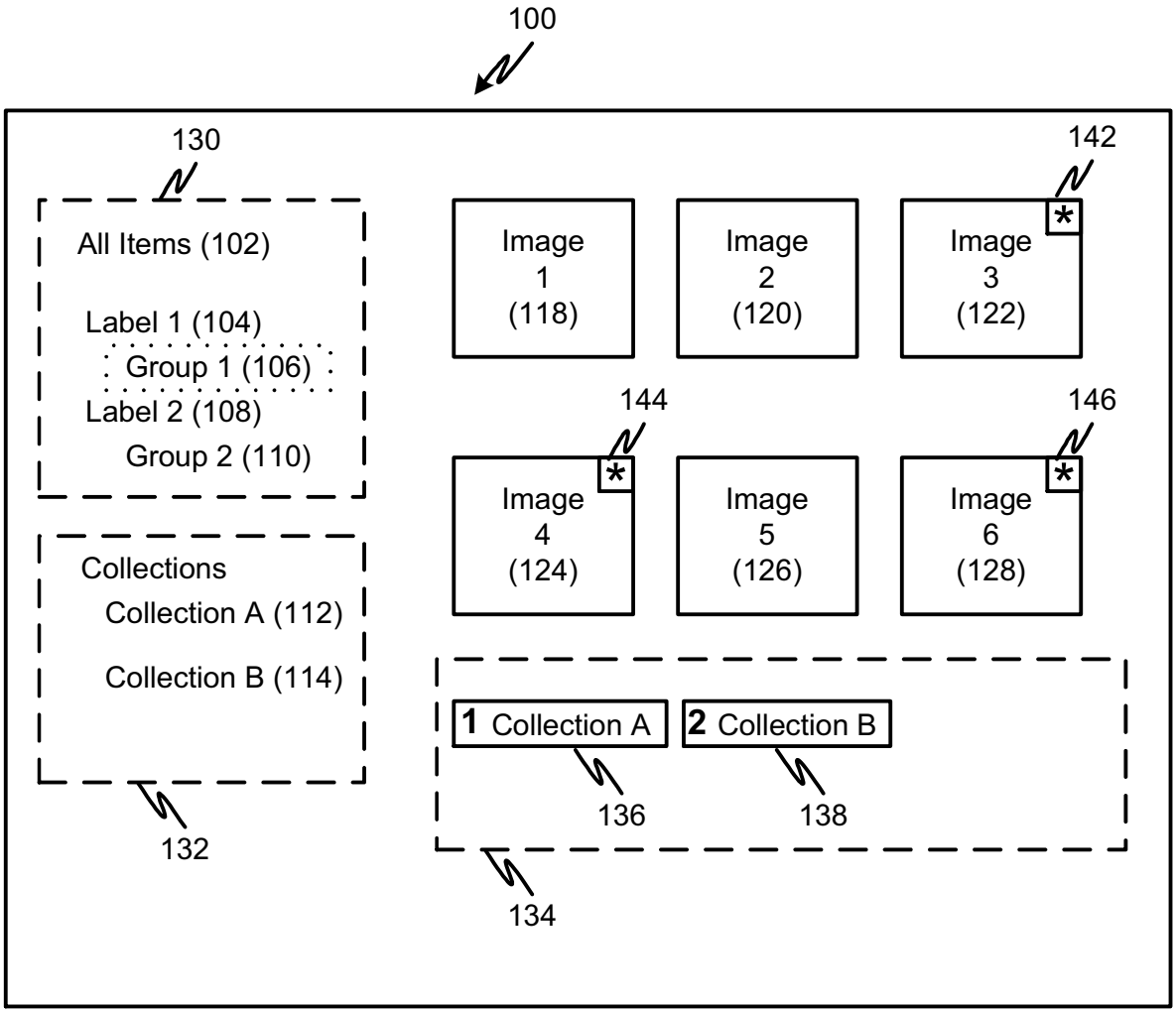
100
130
All Items (102)
Label 1 (104)
Group 1 (106)
Label 2 (108)
Group 2 (110)
Collections
Collection A (112)
Collection B (114)
132
Image 1 (118)
Image 2 (120)
142
Image 3 (122)
144
Image 4 (124)
Image 5 (126)
146
Image 6 (128)
1 Collection A
2 Collection B
136
138
134

FIG. 1

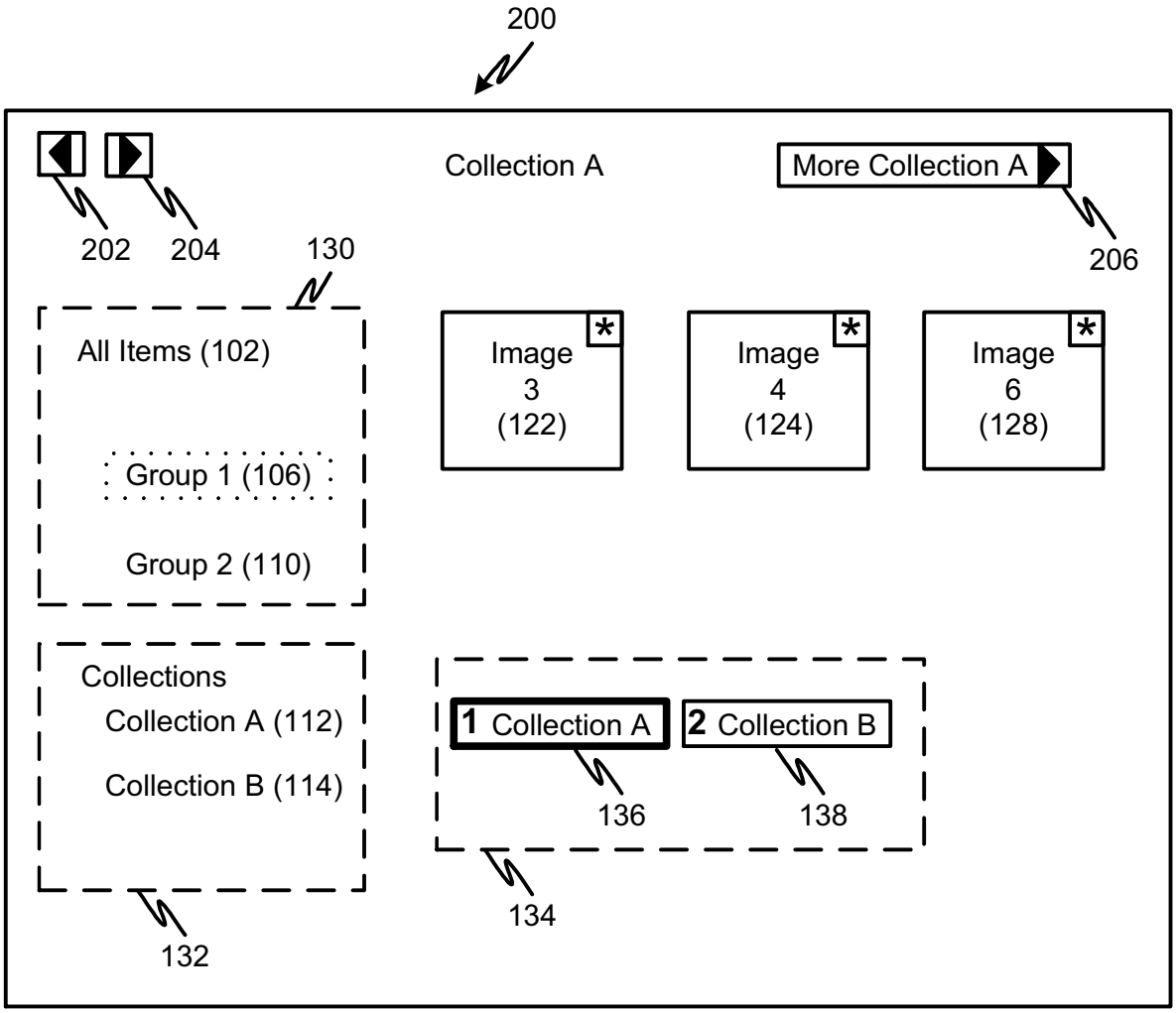
200
Collection A
More Collection A
202
204
130
206
All Items (102)
Group 1 (106)
Group 2 (110)
Image 3 (122)
Image 4 (124)
Image 6 (128)
Collections
Collection A (112)
Collection B (114)
1 Collection A
2 Collection B
136
138
132
134

FIG. 2

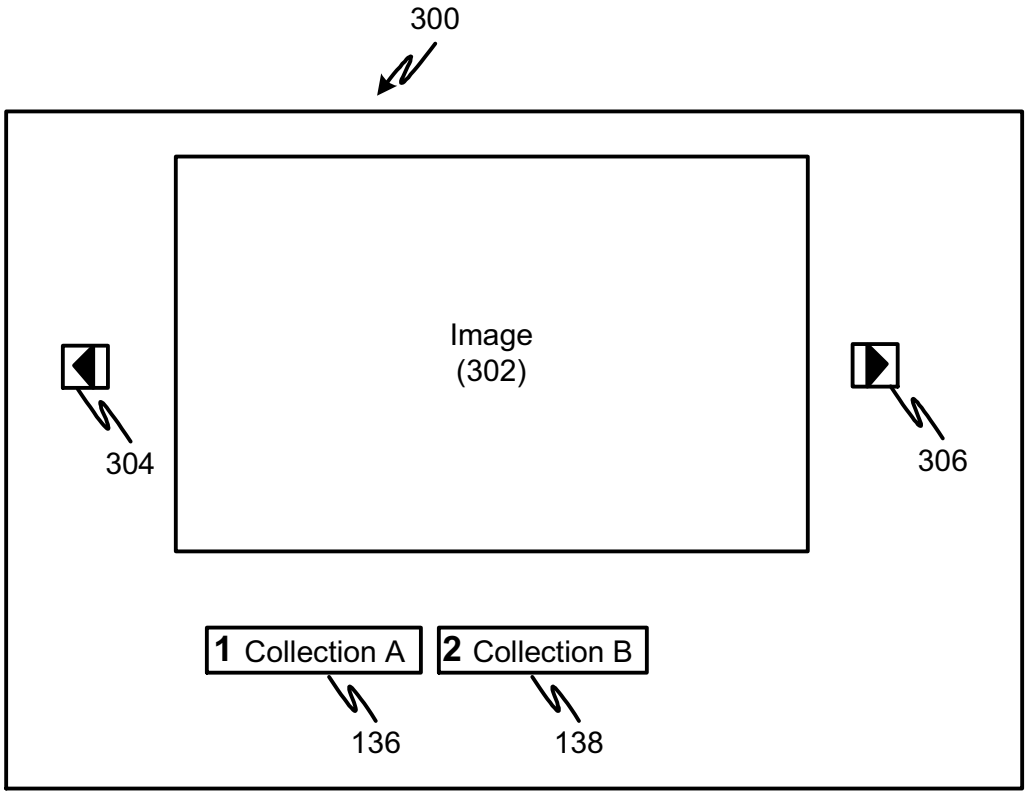

FIG. 3

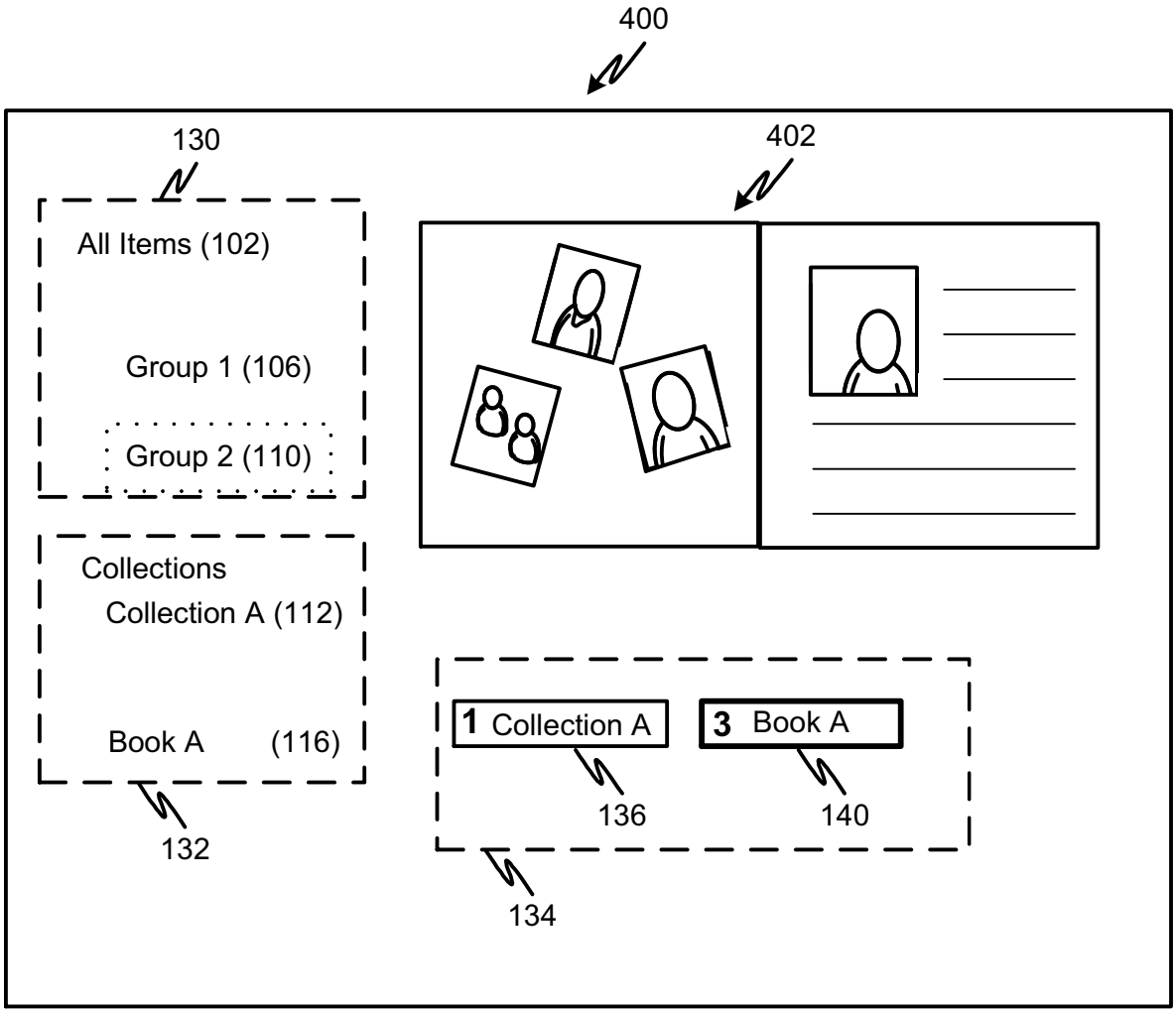
400
130
402
All Items (102)
Group 1 (106)
Group 2 (110)
Collections
Collection A (112)
Book A (116)
132
1 Collection A
3 Book A
136
140
134

FIG. 4

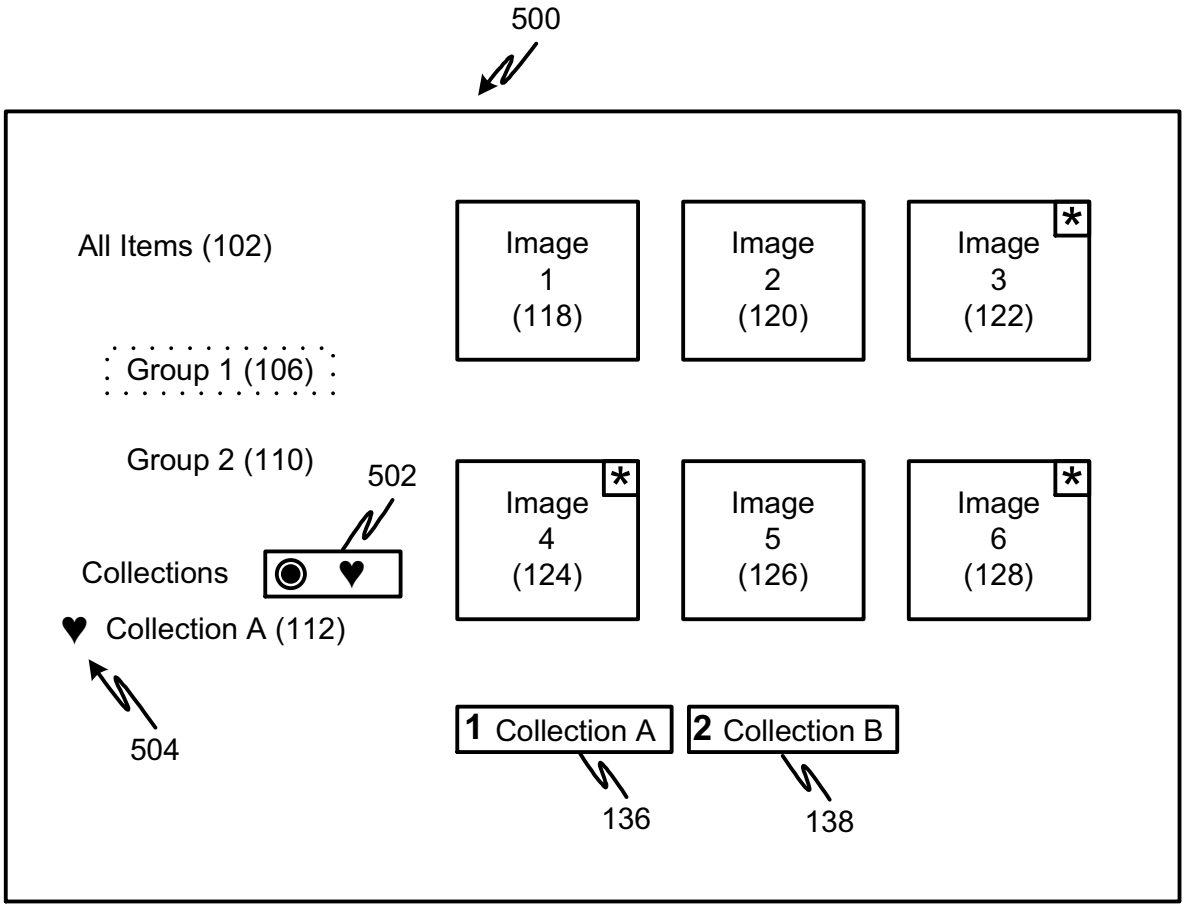
500
All Items (102)
Image 1 (118)
Image 2 (120)
Image 3 (122)
Group 1 (106)
Group 2 (110)
502
Image 4 (124)
Image 5 (126)
Image 6 (128)
Collections
Collection A (112)
504
1 Collection A
2 Collection B
136
138

FIG. 5

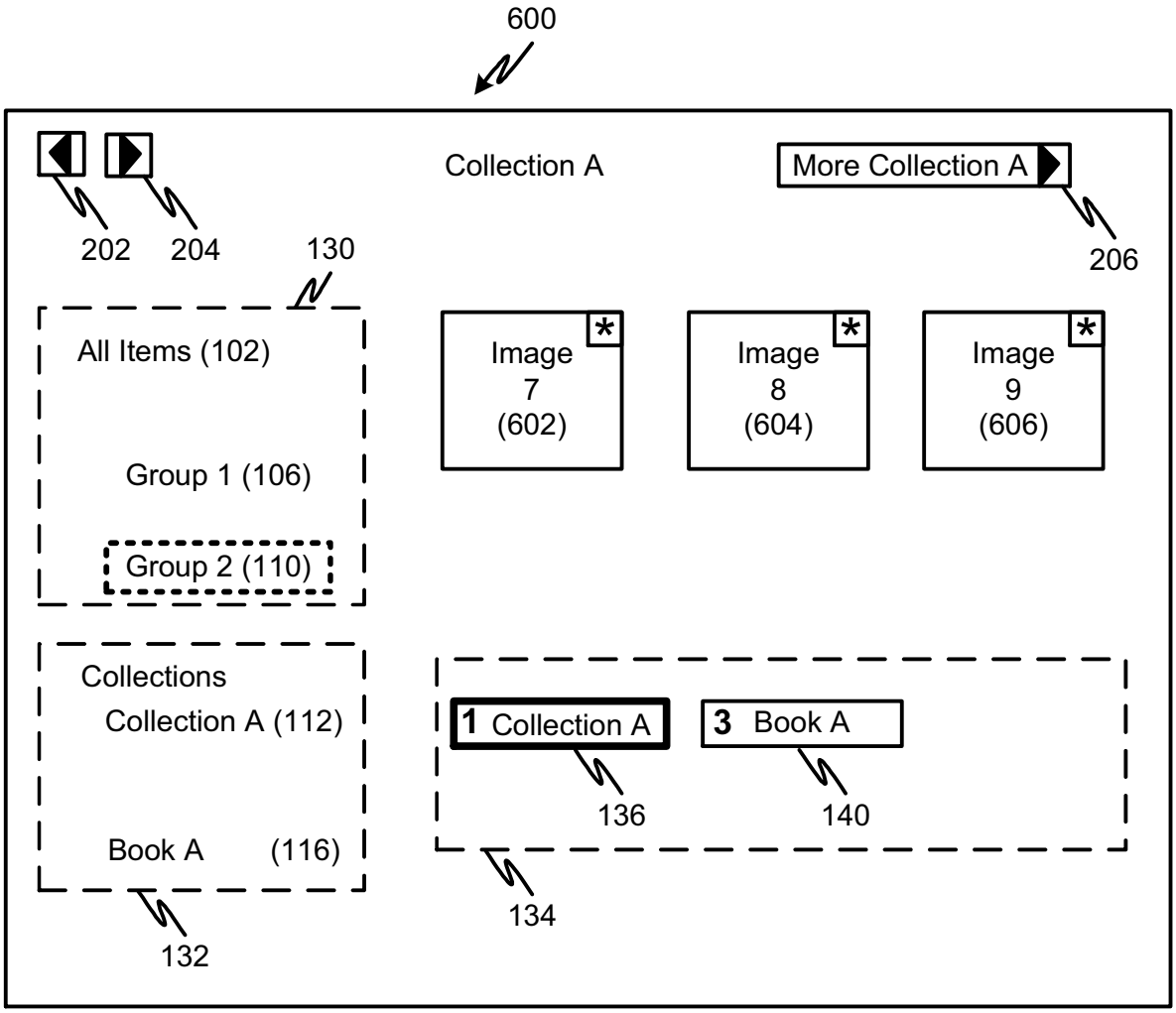
600
Collection A
More Collection A
202
204
130
206
All Items (102)
Group 1 (106)
Group 2 (110)
Image 7 (602)
Image 8 (604)
Image 9 (606)
Collections
Collection A (112)
Book A (116)
1 Collection A
3 Book A
136
140
134
132

FIG. 6

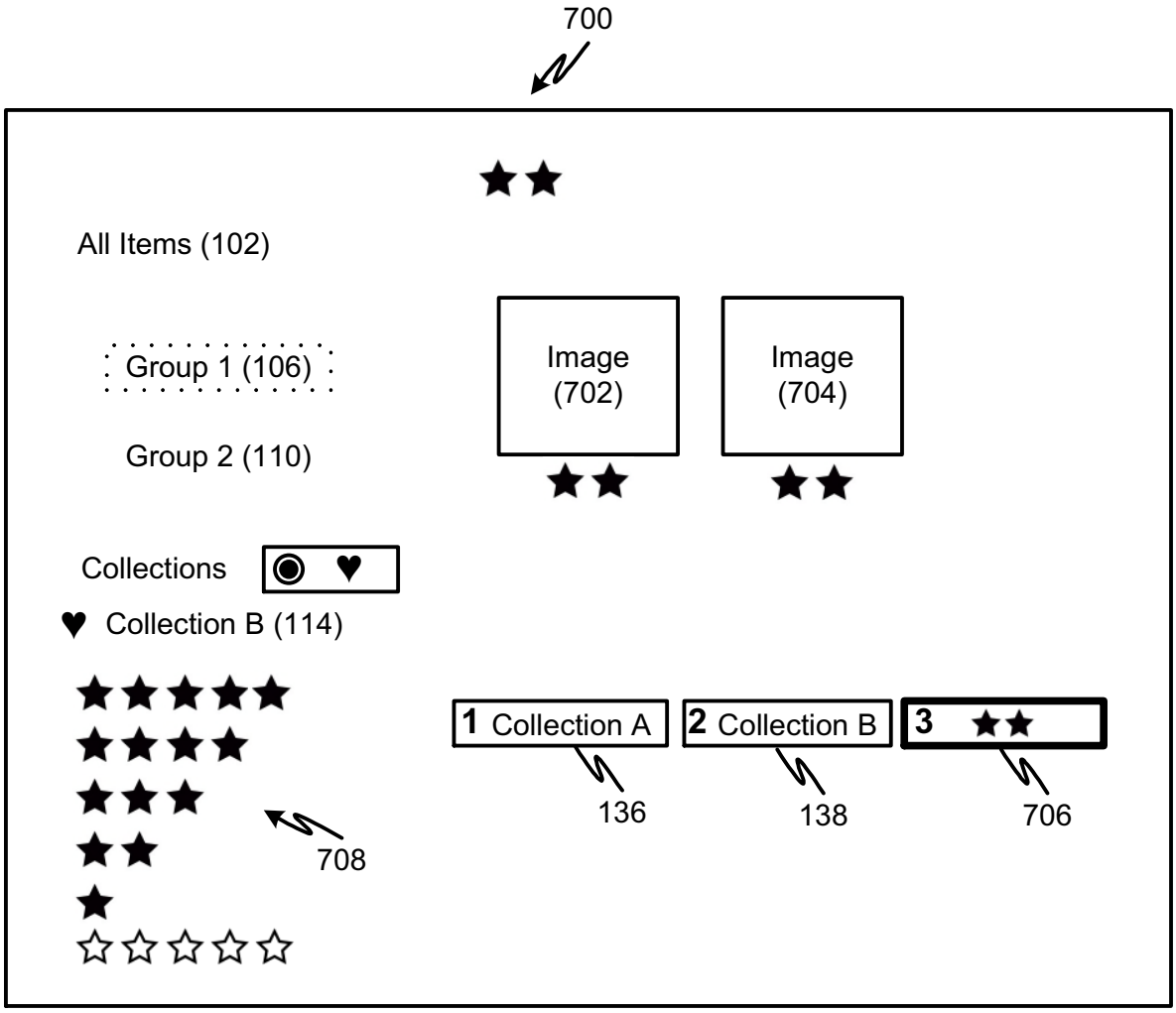
700
All Items (102)
Group 1 (106)
Group 2 (110)
Image (702)
Image (704)
Collections
Collection B (114)
708
1 Collection A
2 Collection B
3
136
138
706

FIG. 7

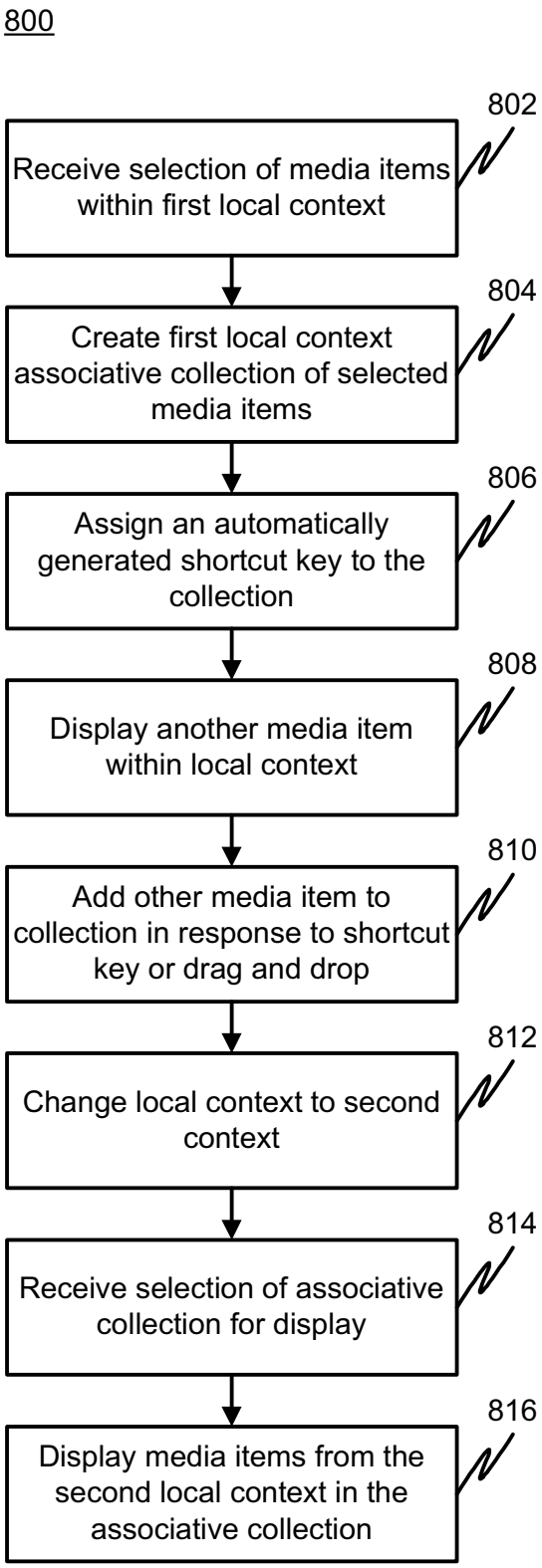
800
802
Receive selection of media items within first local context
804
Create first local context associative collection of selected media items
806
Assign an automatically generated shortcut key to the collection
808
Display another media item within local context
810
Add other media item to collection in response to shortcut key or drag and drop
812
Change local context to second context
814
Receive selection of associative collection for display
816
Display media items from the second local context in the associative collection

FIG. 8

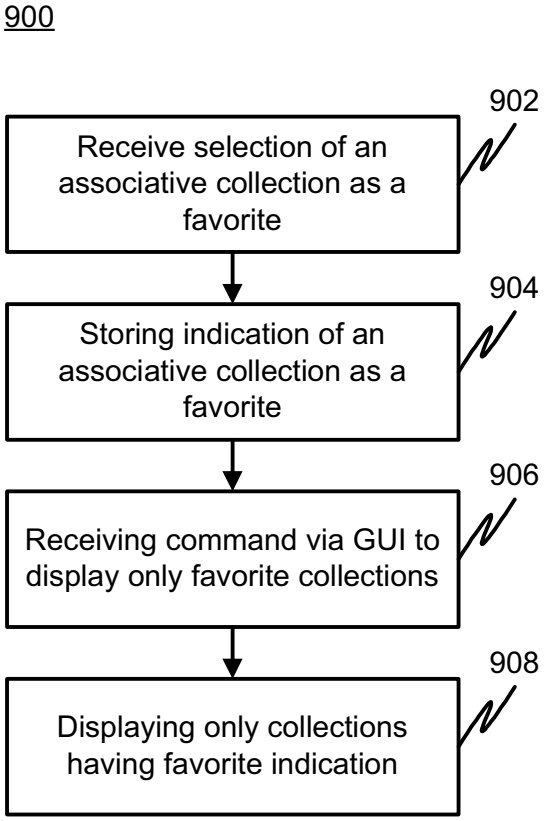
900
902
Receive selection of an associative collection as a favorite
904
Storing indication of an associative collection as a favorite
906
Receiving command via GUI to display only favorite collections
908
Displaying only collections having favorite indication

FIG. 9

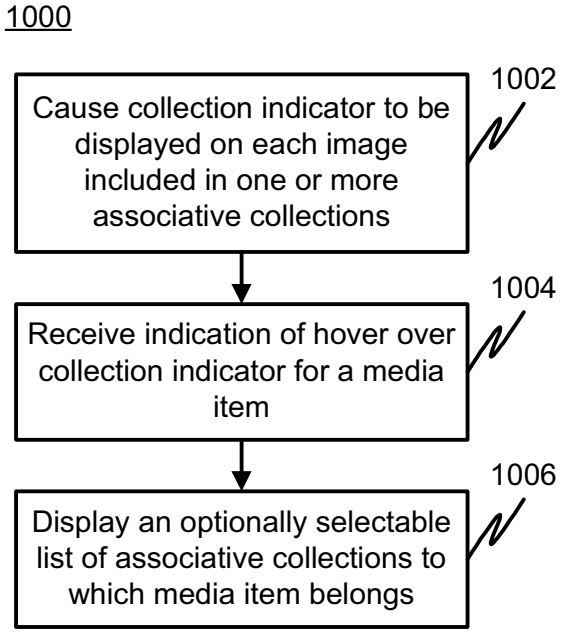
1000
Cause collection indicator to be displayed on each image included in one or more associative collections
1002
Receive indication of hover over collection indicator for a media item
1004
Display an optionally selectable list of associative collections to which media item belongs
1006

FIG. 10

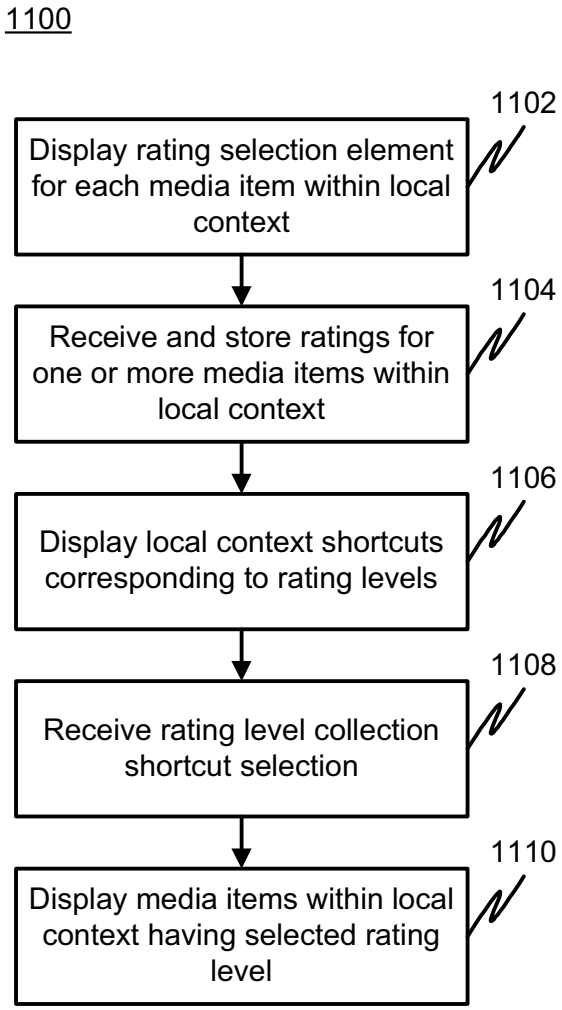
1100
1102
Display rating selection element for each media item within local context
1104
Receive and store ratings for one or more media items within local context
1106
Display local context shortcuts corresponding to rating levels
1108
Receive rating level collection shortcut selection
1110
Display media items within local context having selected rating level

FIG. 11

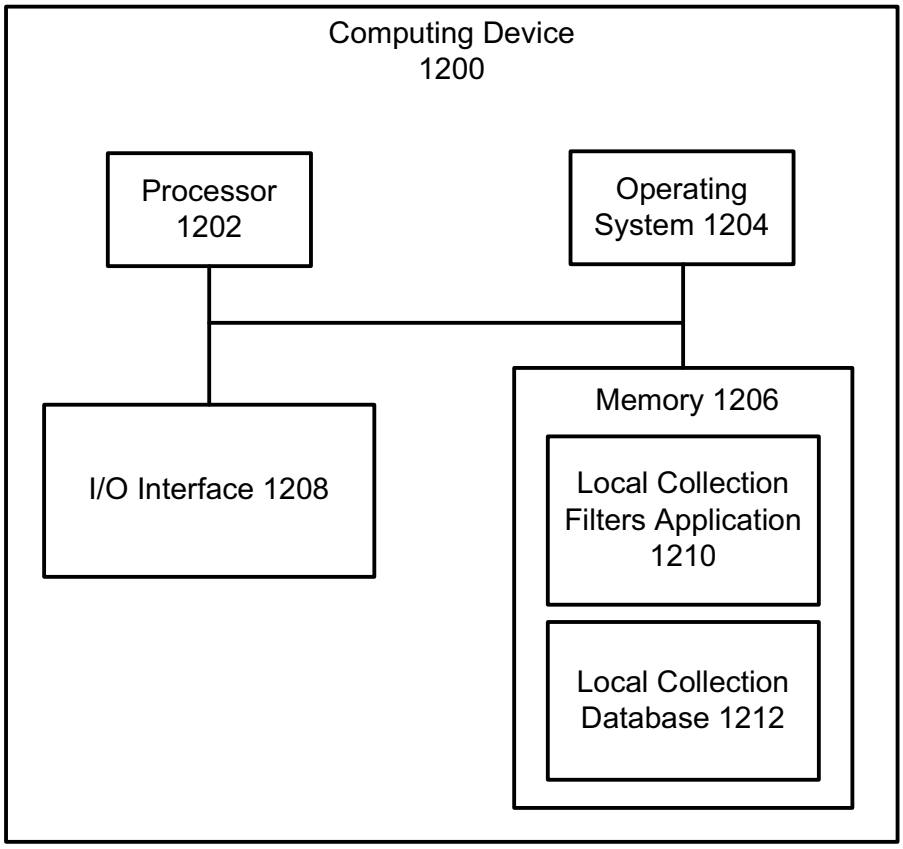
Computing Device
1200
Processor
1202
Operating
System 1204
I/O Interface 1208
Memory 1206
Local Collection
Filters Application
1210
Local Collection
Database 1212

FIG. 12